

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Christopher J. Lutz, Registration No. 44,883 on February 14, 2008.

The claims 1, 8-10, 17, 24, 31-32, 34-35 and 39-43 has been amended as follows:

1. (Currently Amended) A method of organizing and generating report data renderable on a graphical user output device indicative of a plurality of manageable entities in a managed information network comprising:

determining an output criteria applicable to a set of data, the set of data having entries including fields, to compute an output display set adapted for inclusion in a report, the determined output criteria including:

a selection criteria indicative of output records for inclusion in a set of candidate entries selected from the entries; and

an arrangement criteria indicative of display formatting applicable to the candidate entries;

parsing, in a first pass, a plurality of entries in the set of data;

applying, during the first pass, the selection criteria to identify a subset of entries from among the entries in the set of data for inclusion as output records in the report, the selection criteria applying a filtering criteria indicating the fields in

Deleted: computer program product having computer program code embodying an encoded set of processor based instructions on a computer readable medium for performing, via a processor responsive to the instructions, a

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the entries used for an output display set to compute the subset of candidate entries;

the arrangement criteria indicating a logical arrangement order applicable to the subset of candidate entries identified from the first pass;

retaining in a memory, in the first pass, only the fields used in the selection and arrangement criteria;

parsing, during the second pass, the computed subset of candidate entries, the second pass performed on the same set of data unmodified from the first pass;

omitting from a memory, in the second pass, entries in the parsed plurality of entries outside the subset of candidate entries; and

processing, during the second pass, the computed subset of candidate entries according to the arrangement criteria to generate the output display set of entries on the graphical user output device;

the determined output criteria operable on key fields of the entries, the key fields having scalar values operable for comparison, and the set of data being arranged in a predetermined data set format, the data set format operable to designate entries corresponding to rows and fields corresponding to columns.

Deleted: determined output criteria to a portion of each parsed entry to compute a subset of candidate entries, the selection criteria including a filtering criteria defining the portion as fields in the entries deterministic of the entries in the output records, applying further comprising filtering according to the filtering criteria, the filtering operable to designate a subset of entries for inclusion in the first pass by defining the portion and the filtering criteria operable on at least one of the fields for comparison and selective inclusion in the designated subset

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Claims 8-9. (Canceled)

10. (Currently Amended) The method of claim 9 1 wherein the predetermined data set format defines a syntax having a nested structure conversant with a parser operable to perform the first parse and the second parse, the parser further operable to extract entries and fields in each of the entries according to rows and columns.

17. (Currently Amended) A data management device for organizing and generating report data indicative of a plurality of manageable entities renderable on a graphical user output device in a storage area network (SAN) comprising:

an infrastructure monitor operable for receiving an output criteria applicable to a set of data, the set of data having entries including fields, to compute an ordered output display set adapted for inclusion in a report, the received output criteria including:

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a selection criteria to identify a subset of entries from among the entries in the set of data for inclusion as output records in the report, the selection criteria applying a filtering criteria indicating the fields in the entries used for an output display set to compute a subset of candidate entries; and

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an arrangement criteria indicative of a logical arrangement order applicable to the subset of candidate entries identified from the first pass, the set of data arranged in a predetermined data set format, the data set format operable to designate entries corresponding to rows and fields corresponding to columns;

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a parser in the infrastructure monitor for parsing, in a first pass, a plurality of entries in the set of data, the parser operable to omit from a memory, in the second pass, entries in the parsed plurality of entries outside the subset of candidate entries;

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a first handler in the parser for applying, during the first pass, the selection criteria to identify a subset of entries from among the entries in the set of data for inclusion as output records in the report, the selection criteria applying a filtering criteria indicating the fields in the entries used for an output display set to compute the subset of candidate entries;

Deleted: determined output criteria to a portion of each parsed entry to compute a subset of candidate entries, further comprising a filter handler operable according to a filtering criteria defining the portion as fields in the entries deterministic of the entries in the output records, the filtering operable to designate a subset of entries for inclusion in the first pass by defining the portion and the filtering criteria operable on at least one of the fields for comparison and selective inclusion in the designated subset

a memory for retaining, in the first pass, only the selection and arrangement criteria fields;

a second handler in the parser for applying, during a second pass, the arrangement criteria to the subset of candidate entries, the arrangement criteria indicating a logical arrangement order applicable to the subset of candidate entries identified from the first pass, the parser operable to process, during the second pass, the computed subset of candidate entries according to the

Deleted: parsing, in a second pass, the computed subset of candidate entries, the second pass performed on the same set of data unmodified from the first pass,

determined output criteria to generate the ordered output display set of entries on the graphical user output device;

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~~the determined output criteria operable on key fields of the entries, the key fields having scalar values operable for comparison, and the set of data being arranged in a predetermined data set format, the data set format operable to designate entries corresponding to rows and fields corresponding to columns.~~

Claim 24. (Canceled)

31. (Currently Amended) A method for efficient memory usage for organizing and generating report data indicative of a plurality of manageable entities in a storage area network (SAN) comprising:

determining, via a user input request, an output criteria applicable to a set of data, the set of data having entries including fields, to compute an ordered output display set adapted for inclusion in a report;

parsing, by a build set handler, in a first pass, a plurality of entries in the set of data;

filtering according to a filtering criteria, the filtering operable to designate a subset of entries for inclusion in the first pass and the filtering criteria operable on at least one of the fields for comparison and selective inclusion in the designated subset;

retrieving, during the parsing, a portion of each of the plurality of entries, the filtering criteria defining the portion as fields in the entries deterministic of the entries in the output display set, wherein the parsed entries in the first pass are inoperably large for concurrent memory residence;

applying, during the first pass, ~~a selection criteria in the determined output criteria, the selection criteria for identifying a subset of entries from among the entries in the set of data for inclusion as output records in the report, the selection criteria applying a filtering criteria indicating the fields in the entries used for an output display set to compute the subset of candidate entries, the~~

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first pass further comprising filtering entries for omission from the candidate set and comparing key fields in entries for inclusion in the candidate set;

retaining in a memory, in the first pass, only the selection and arrangement criteria fields;

parsing, by a match set handler, in a second pass, the computed subset of candidate entries to identify entries in the data set corresponding to the portions of entries in the candidate entries, the second pass applying an arrangement criteria indicating a logical arrangement order applicable to the subset of candidate entries identified from the first pass and performed on the same set of data unmodified from the first pass;

retrieving, by the match set handler, the entire entry corresponding to each of the portion of the entry in the candidate entries;

processing, by a sort handler, during the second pass, the computed subset of candidate entries according to the determined output criteria to generate complete entries of the entries in the candidate set, wherein the parsed entries of the second pass require less memory than the first pass such that the parsed entries of the second pass are stored simultaneously in memory, the second pass further comprising matching entries for inclusion in the candidate set, sorting entries in the candidate set, and formatting entries in the candidate set for display on the output device;

formatting, by a format handler, the processed computed subset of entries to generate the output display set of entries on a graphical user output device, the output display set of entries corresponding to the computed subset of entries and ordered according to the ordering logic; and

omitting from the memory, during the second pass, entries in the data set outside the output display set of entries;

the determined output criteria operable on key fields of the entries, the key fields having scalar values operable for comparison, and the set of data being arranged in a predetermined data set format, the data set format operable to designate entries corresponding to rows and fields corresponding to columns.

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32. (Currently Amended) A computer program product having a computer readable medium operable to store computer program logic embodied in an encoded set of processor based instructions encoded thereon for performing, via a processor responsive to the instructions, organizing and generating report data renderable on a graphical user output device indicative of a plurality of manageable entities in a managed information network comprising:

computer program code for determining an output criteria applicable to a set of data to compute an ordered output display set adapted for inclusion in a report, the set of data having entries including fields, the determined output criteria including:

a selection criteria for identifying, in a first pass, a subset of entries from among the entries in the set of data for inclusion as output records in the report, the selection criteria applying a filtering criteria indicating the fields in the entries used for an output display set to compute the subset of candidate entries; and

an arrangement criteria indicative of display formatting applicable to the candidate entries, the arrangement criteria operable in a second pass for indicating a logical arrangement order applicable to the subset of candidate entries identified from the first pass;

computer program code for parsing, in the first pass, a plurality of entries in the set of data;

computer program code for applying, during the first pass, the determined output criteria to a portion of each parsed entry to compute a subset of candidate entries, the output criteria defining the portion as fields in the entries deterministic of the entries in the output records;

retaining in a memory, in the first pass, only the output criteria fields;

computer program code for parsing, in the second pass, the computed subset of candidate entries, the second pass performed on the same set of data unmodified from the first pass;

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computer program code for omitting from a memory, in the second pass, entries in the parsed plurality of entries outside the candidate set; and

computer program code for processing, during the second pass, the computed subset of candidate entries according to the determined output criteria to generate the ordered output display set of entries ~~in a tangible medium of expression on the graphical user output device;~~

~~the determined output criteria operable on key fields of the entries, the key fields having scalar values operable for comparison, and the set of data being arranged in a predetermined data set format, the data set format operable to designate entries corresponding to rows and fields corresponding to columns.~~

34. (Currently Amended) A data management device for organizing and generating report data indicative of a plurality of manageable entities renderable on a graphical user output device in a storage area network (SAN) comprising:

means for determining an output criteria applicable to a set of data, the set of data having entries including fields, to compute an ordered output display set adapted for inclusion in a report, the determined output criteria including:

~~a selection criteria to identify, in a first pass, a subset of entries from among the entries in the set of data for inclusion as output records in the report, the selection criteria applying a filtering criteria indicating the fields in the entries used for an output display set to compute the subset of candidate entries; and~~

~~an arrangement criteria indicative of display formatting applicable to the candidate entries, the arrangement criteria operable in a second pass for indicating a logical arrangement order applicable to the subset of candidate entries identified from the first pass;~~

means for parsing, in ~~the first pass~~, a plurality of entries in the set of data;

means for applying, during the first pass, the determined output criteria to a portion of each parsed entry to compute a subset of candidate entries, the

Deleted: indicative of output records for inclusion in a set of candidate entries selected from the entries, the selection criteria including a filtering criteria, applying further comprising filtering according to the filtering criteria, the filtering operable to designate a subset of entries for inclusion in the first pass and the filtering criteria operable on at least one of the fields for comparison and selective inclusion in the designated subset

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output criteria defining the portion as fields in the entries deterministic of the entries in the output records;

retaining in a memory, in the first pass, only the output criteria fields;

means for parsing, in ~~the~~ second pass, the computed subset of candidate entries, the second pass performed on the same set of data unmodified from the first pass;

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means for omitting from a memory, in the second pass, entries in the parsed plurality of entries outside the candidate set; and

means for processing, during the second pass, the computed subset of candidate entries according to the determined output criteria to generate the ordered output display set of entries in a tangible medium of expression on the graphical user output device;

~~the determined output criteria operable on key fields of the entries, the key fields having scalar values operable for comparison, and the set of data being arranged in a predetermined data set format, the data set format operable to designate entries corresponding to rows and fields corresponding to columns.~~

35. (Currently Amended) A method for organizing and generating report data indicative of a plurality of manageable entities renderable on a graphical user output device in a managed information network comprising:

determining an output criteria applicable to a set of data, the set of data having entries including fields, to compute an ordered output display set adapted for inclusion in a report, the determined output criteria including:

~~a selection criteria operable during a first pass to identify a subset of entries from among the entries in the set of data for inclusion as output records in the report, the selection criteria applying a filtering criteria indicating the fields in the entries used for an output display set to compute a subset of candidate entries; and~~

~~an arrangement criteria operable during a second pass for indicating a logical arrangement order applicable to the subset of~~

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~~candidate entries identified from the first pass for determining display formatting applicable to the candidate entries; parsing, in a first pass, a plurality of entries in the set of data; retaining in a memory, in the first pass, only the fields referenced by the selection and arrangement criteria;~~

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applying, during the first pass, the determined output criteria to a portion of each parsed entry to compute a subset of candidate entries, the output criteria defining the portion as fields in the entries deterministic of the entries in the output records;

~~parsing, in the second pass, the computed subset of candidate entries, the parsed entries of the second pass requiring less memory than the first pass such that the parsed entries of the second pass are stored simultaneously in memory, the second pass performed on the same set of data unmodified from the first pass;~~

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omitting from a memory, in the second pass, entries in the parsed plurality of entries outside the candidate set; and

processing, during the second pass, the computed subset of candidate entries according to the determined output criteria to generate the ordered output display set of entries ~~in a tangible medium of expression~~ on a graphical user output device;

~~the determined output criteria operable on key fields of the entries, the key fields having scalar values operable for comparison, and the set of data being arranged in a predetermined data set format, the data set format operable to designate entries corresponding to rows and fields corresponding to columns.~~

Claims 39-43. (Canceled)

REASONS FOR ALLOWANCE

1. Claims 1, 4-7, 10, 12-17, 20-23, 26-29, 31-32, and 34-37 are allowed.
2. The following is a statement of reasons for the indication of allowable subject matter:

In interpreting the claims in light of the specification and applicant's arguments, the Examiner finds the claimed invention is patentably distinct from the prior art of record.

The prior art of record includes Woodmansee et al. (Woodmansee, US Patent Application Publication No. US 2002/0178140 A1, Yankovsky, US Patent Application Publication No. US 2004/0117381, Jamshidi et al. (Bates), US Patent No. 6,631,497, Bates et al. (Bates), US Patent No. 6,901,403, Cuckson et al. (Cuckson), US Patent Application Publication No. 2004/0193646.

Woodmansee discloses a method of storing and recovering database analysis information including extracting data from a database system and processing the extracted data to produce sorted or organized datasets (Abstract). Woodmansee further discloses developing a set of data filters or other criteria for selecting relevant information from large datasets from the database system (paragraphs [0003], [0012]). Woodmansee further discloses the set of data having entries including fields in columns and rows shown in Figure 6. Woodmansee further discloses filtering means for enabling the processor to filter data from the database in order to produce sorted datasets from the filtered data and display the sorted datasets through a PC client (paragraph [0018]).

Woodmansee further discloses filters including desired ranges of data (a set of data) from known data fields (paragraph [0046]).

Yankovsky discloses the source parser parses the source document to locate values called for the result XML, the values may be stored in an areas of memory that maybe referred to as a values storage cache in the first part parse (first pass), and in the second pass, the output controller populates the values stored in the storage cache in the result document (pages 2-3, paragraphs [0022]-[0033]).

Jamshidi discloses binding data from a data source to one or more cells in a spreadsheet by importing data object and defining a data source model for a data object (col. 2, lines 16-21). Thus this teaching implies data is arranged in a predetermined data format, the data set format operable to designate entries corresponding to rows and columns.

Bates discloses a file system interface provide callbacks corresponding to system requests and communicate the requests to the data access manager (col. 11, lines 54-66).

Cuckson discloses data for the data environment are loaded into records, each record include a start field and an end field, which identify the earliest and latest point in time in which data is applied to the record (paragraph [0020]). Cuckson further discloses mapping data from one or more data environments into a consistent format (paragraphs [0019],[0045]).

Claim 1 is allowed because the prior art of record does not expressly disclose alone or in combination applying in a first pass the selection criteria

(from determined output criteria) to identify a subset of entries from among the entries in the set of data for inclusion as output records in the reports, the selection criteria applying a filtering criteria indicating the fields in the entries used for an output display set to compute the subset of candidate entries; parsing in a second pass the computed subset of candidate entries and the second pass performed on the same set of data unmodified from the first pass; processing in the second pass the computed subset of candidate entries according to the arrangement criteria to generate the output display set of entries on the graphical user output device. In addition, claim 1 is allowed because the prior of record does not expressly disclose alone or in combination the determined output criteria operable on key fields of the entries, wherein the key fields having scalar values operable for comparison.

Claims 4-7, 10, and 12-16 further limit independent claim 1. Claims 17, 20-23, 26-29, 31-32, and 34-37 are allowed as well for the same reason set forth in claims 1, 4-7, 10 and 12-16.

All independent claims 1, 17, 31-32, and 34-35 recite computer hardware in the body of these claims such as "generate the ordered output display set of entries on a graphical user output device". Therefore, all the independent claims 1, 17, 31-32, and 34-35 recite statutory subject matter.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the Issue Fee and, to avoid processing delays, should preferably accompany the Issue Fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chau Nguyen whose telephone number is (571) 272-4092. The Examiner can normally be reached on Monday-Friday from 8:30 am to 5:30 pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Doug Hutton, can be reached at (571) 272-4137.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. On July 15, 2005, the Central Facsimile (FAX) Number will change from 703-872-9306 to 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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